the mathematical gazette

Index to Volume 69: Numbers 447–450 1985

THE MATHEMATICAL ASSOCIATION £1

THE MATHEMATICAL GAZETTE

VOL. 69

MARCH 1985 TO DECEMBER 1985

Nos. 447–450

THE MATHEMATICAL GAZETTE

1985

COMPUTER TYPESET BY SB DATAGRAPHICS, PRINTED AND BOUND BY SPOTTISWOODE BALLANTYNE,
COLCHESTER AND LONDON

Index
to the
Mathematical Gazette

Vol. 69 1985

No.	Month	Pages
447	March	1–76
448	June	77–158
449	October	161–247
450	December	249–321

Articles	Obituary
Notes	Correspondence
Problems	Reviews

Articles

Author	Title	Page
Edward J. Allen	Continued radicals	261
Oliver D. Anderson	The twenty-one card trick	188
C. B. G. Ash	Powerful sequences	249
John Baylis	Reasonable elections don't exist!	95
Lynette M. Bloom, Geoffrey A. Comber & James M. Cross	Two important limits via the computer	178
Christopher Bradley	The absolute correlation coefficient	12
Stephen Buckley & Desmond MacHale	Dividing an angle into equal parts	9
Frank Budden	Cayley graphs for some well-known groups	271
B. L. Burrows & R. F. Talbot	The mean deviation	87
Philip Chatwin	Vectors and the geometry of a triangle	197
Peter B. Coaker	Why teach mathematics? (1985 Presidential Address)	161
Tony Crilly	Double sequences of positive integers	263
Brian Denton	Roots of unity revisited!	17
David S. Fielker	Investigational work at A-level	5
Patrick Fitzpatrick	Generating and enumerating magic squares	357
Michael Fox	Quick Padé approximations	21
Tony Gardiner	Infinite processes in elementary mathematics: how much should we tell the children?	77
P. Goodwin	A polyhedral series or two	191

AUTHOR	TITLE	PAGE
M. A. Grant	A locus problem	91
Kuldeep Kumar	Approximate integration by best fit	25
E. Keith Lloyd	How many bingo cards are there?	1
D. Mackie & T. Scott	Pitfalls in the use of computers for the Newton-Raphson method	252
Anthony C. Robin	The wife-swapping distribution	175
Kenneth Ruthven	A-level mathematics in an information age	103
Alan Tomkins & David Pitt	Runs and the generalised Fibonacci sequence	109
David Towers	Problems faced by mathematics students at the school/higher education interface	180

Notes

March	69.1–69.10
June	69.11–69.22
October	69.23–69.31
December	69.32–69.42

AUTHOR	No.	TITLE	PAGE
A. K. Austin	69.8	Two curiosities	42
D. F. Bailey	69.11	$N^{1/m}$ revisited	113
Robert Barbour	69.12	Quadrisecting quadrilaterals	114
John Baylis	69.3	$x^n e^{-x} \to 0$ as $x \to \infty$	32
A. Charnow & E. Charnow	69.40	An application of algebra to number theory	292
F. Chorlton	69.7	Evaluation of some finite and infinite products	40
F. Chorlton	69.28	A generalisation of the Steiner-Lehmus theorem	215
L. E. Clarke	69.22	Integration under the integral sign again	131
D. J. Colwell, J. R. Gillett & S. I. E. Green	69.20	A problem associated with fitting straight lines to data	125
D. Culpin	69.5	More parametric curves	37
Branko Grünbaum & G. C. Shephard	69.14	Space filling with identical symmetrical solids	117
Gordon Haigh	69.17	Cross sections and minimal surface area	122
Graham Howlett *et al.*	69.25	Consecutive heads and Fibonacci	208
G. H. Lawden	69.42	Envelope of Simpson lines	296
Gao Ling	69.6	Geometric and arithmetic means again	39
Nick Lord	69.13	The normal approximation to the binomial	116
N. J. Lord	69.27	The irrationality of e and others	213
T. P. McDonough	69.29	A non-square invertible matrix	216
Barry Martin	69.37	Chebyshev and Pell	288
David Mountford	69.36	Bounds for $n!$	286

Author	No.	Title	Page
A. H. Nasr	69.38	A trigonometric inequality	289
D. J. Orton	69.2	Binomials mod 3	31
D. J. Orton	69.41	A circumscribing quadrilateral	295
Lindsay J. Paterson & C. A. Glasbey	69.21	An illustration of rounding error on computers	128
J. M. Peters	69.26	Getting down to tan $1\frac{1}{2}°$	211
Roger Pinkham	69.32	The birthday problem; pairs and triples	279
Richard Pollard	69.9	Goal-scoring and the negative binomial distribution	45
M. D. Stern	69.30	A remarkable approximation to π	218
M. D. Stern	69.33	Calculations before calculators	280
Charles A. Stickland	69.19	Integration as an aid to approximation	124
W. T. Sulaiman	69.18	A moments proof for $\sum r^2$	123
N. D. Thomson	69.34	Representations of integers and permutations	283
George Tyson	69.4	π by experiment	36
George Tyson	69.23	Bright spots	205
Donald Watson	69.31	Tangents to conics	219
Hunter Watson	69.16	A fallacy by parts	122
David Willey	69.39	Calculating the date of Easter	291
Dylan William	69.1	A Fibonacci sum	29
D. J. Winteridge & D. C. Young	69.24	Mathematics, cricket and common sense	206
P. G. Wood	69.10	The shear rule	47
P. G. Wood	69.35	Distance in terms of final velocity	285
Robert M. Young	69.15	The error in alternating series	120

Problem corner

68.E and 68.F	Page 219 (1984)	Solutions page 49
68.G and 68.H	Page 294 (1984)	Solutions page 135
69.A and 69.B	Page 48	Solutions page 221
69.C and 69.D	Page 135	Solutions page 302
69.E and 69.F	Page 221	Solutions in 1986 edition
69.G and 69.H	Page 301	

Correspondence

		Page
Christopher Bradley	Triples of integers	138
Ivor Grattan-Guinness	Airy's paradox	301
D. M. Hallowes	Integral cuboids	137
Francis Lopez-Real	The quadratrix and Buffon's needle	299
R. H. MacMillan	Space filling with identical symmetrical solids: a footnote to 69.14	300

Obituary

Deceased	Author	
Donald Henry Halfpenny	*F. J. Budden*	298

Reviews

AUTHOR	TITLE	REVIEWER	PAGE
Ali A. Al-Daffa & John J. Stroyls	Studies in the exact sciences in medieval Islam	*F. Smithies*	235
R. Allan & M. Williams	Mathswise; book 1	*Brian Woodgate*	304
Hugh ApSimon	Mathematical byways (in Ayling, Beeling and Ceiling)	*VWB*	154
M. A. Armstrong	Basic topology	*H. B. Griffiths*	246
ATM	"L"—A mathematical adventure game	*L. G. Thompson*	228
Claudio Baiocchi & Antonio Capelo	Variational and quasivariational inequalities: applications to free-boundary problems	*Ll. G. Chambers*	70
A. Baker	A concise introduction to the theory of numbers	*David Singmaster*	318
Julio Bastida	Field extensions and Galois theory (Encyclopedia of mathematics and its applications, Vol. 22)	*Haya Freedman*	68
Barry Bastow *et al.*	40 mathematical investigations	*D. J. Winteridge*	305
E. B. Becker, G. F. Carey & J. T. Oden	Finite elements: an introduction volume 1	*F. B. Ellerby*	156
L. W. Beineke & R. J. Wilson (eds)	Selected topics in graph theory 2	*Terry Griggs*	150
R. Billstein, S. Liberskind & J. W. Lott	A problem-solving approach to mathematics for elementary school teachers (2nd. edition)	*Paul Ernest*	139
C. A. Bishop	Applied mathematics 'A' level	*Charles Parker*	53
T. S. Blyth & E. F. Robertson	Algebra through practice, books 1, 2, 3	*John Abram*	147
Brian Bolt	The amazing mathematical amusement arcade	*S. Ralls*	141
L. Bostock & S. Chandler	Mathematics: mechanics and probability	*Aubrey Emerson*	232
L. Bostock *et al.*	ST(P) Mathematics 1	*David Griffiths*	52
L. Bostock *et al.*	ST(P) Mathematics 2	*David Griffiths*	230
S. J. Brams	Superior beings: if they exist how would we know?	*Ian Darke*	75
T. Bridgeman *et al.*	Core books in advanced mathematics Methods of trigonometry Coordinate geometry and complex numbers Mechanics of groups of particles Newton's laws and particle motion	*Edward Reeves*	232

Author	Title	Reviewer	Page
Paul Briten	Mastermaths Pupil's books 1, 2, 3, 4. Teacher's resources books 1, 2, 3, 4.	*Roy Hollands*	141
B. D. Bunday	Basic Optimisation methods	*F. Chorlton*	316
B. D. Bunday	Basic linear programming	*Janet Dangerfield*	317
Laurie Buxton	Mathematics for everyman	*E. S. Ainley*	51
Laurie Buxton	Mathematics for everyman	*Short notice*	321
G. F. Carey & J. T. Oden	Finite elements: a second course, volume 2	*F. B. Ellerby*	156
Stephen Castell	Computer bluff	*Tom Bunting*	57
C. I. Chase	Elementary statistical procedures (third edn.)	*K. E. Selkirk*	240
Ruel V. Churchill & James Ward Brown	Complex variables and applications (4th edn.)	*D. B. Scott*	243
Vašek Chvátal	Linear programming	*J. Asquith*	151
D. J. Cooke & H. E. Bez	Computer mathematics	*Mike Worboys*	238
C. J. Cox & D. Bell	Understanding mathematics: volume 1 Pupils' book Teachers' manual	*David Womack*	303
J. Crawshaw & J. Chambers	A concise course in A-level statistics	*P. H. Ransom*	144
M. Cross & A. O. Moscardini	Learning the art of mathematical modelling	*R. Davison*	312
C. W. Curtis	Linear algebra: An introductory approach	*Norman Gowar*	247
Ann Cutler & Rudolph McShane	The Trachtenberg speed system of basic mathmatics	*John Dunford*	311
Fred Daly, Bob Burn & Chris Forecast	Tessellations	*Nigel Webb*	315
I. Dawbarn	Penguin passnotes: Mathematics	*E. A. Door*	143
Andrew Demetropoulos & Kenneth C. Wolff	Intermediate algebra	*Gordon Habbishaw*	306
Jasmine Denyer	Mathematics across the curriculum	*K. J. Smith*	56
William J. Derrick	Complex analysis and applications (2nd edn.)	*Mary Hart*	60
J. Dixmier	General topology	*N. J. Lord*	245
R. D. Driver	Why math?	*I. Steggles*	307
H. D. Ebbinghaus, J. Flum & W. Thomas	Mathematical logic	*Keith Austin*	147
Allen L. Edwards	An introduction to linear regression and correlation (2nd edn.)	*E. H. Lockwood*	62
C. H. Edwards Jr. & David E. Penney	Elementary differential equations with applications	*R. L. E. Schwarzenberger*	318

AUTHOR	TITLE	REVIEWER	PAGE
I. Gwyn Evans	Statistics for Advanced level mathematics	*Rex Watson*	54
Harley Flanders	Scientific PASCAL	*J. V. Tucker*	314
Harley Flanders	Calculus	*Graham Brindley*	315
Graham Flegg	Numbers: their history and meaning	*Stanley Collings*	235
Martin Gardner	Wheels, life and mathematical amusements	*D. C. Carter*	75
Martin Gardner	Mathematical magic show	*Michael Cornelius*	153
G. R. Gilbart-Smith, R. Q. Edmonds & D. J. Hillard	Fundamental mathematics	*I. G. Gunter*	231
Gene H. Golub & Charles F. Van Loan	Matrix computation	*T. J. Randall*	152
Madeline P. Goodstein	Sci-math: applications in proportional problem solving	*W. F. Pollard*	52
Byron S. Gottfried	Elements of stochastic process simulation	*P. M. Lee*	64
A. K. Govil	Definitions and formulae in statistics (2nd edn.)	*Quentin Des Clayes*	61
Emil Grosswald	Topics from the theory of numbers (2nd edn.)	*Terence Jackson*	151
P. R. Halmos (Donald E. Sarason & Leonard Gillman, eds.)	Selecta: expository writing	*H. P. Rogosinski*	73
R. Hammond	Forward 100: LOGO and your child	*Maurice Hart*	228
D. Hestenes & G. Sobcyzk	Clifford algebra to geometric calculus	*C. W. Kilmister*	158
Stefan Hildebrandt & Anthony Tromba	Mathematics and optimal form	*J. D. Ede*	309
Gerhard P. Hochschild	Perspectives of elementary mathematics	*John Baylis*	72
C. Hopkins	Examination study in mathematics	*D. M. Berry*	309
C. Hopkins	Revision study in mathematics	*J. W. Brook*	308
Jeffrey J. Hunter	Mathematical techniques of applied probability: Volume 1, Discrete time models: Basic theory; Volume 2, Discrete time models: techniques and applications	*L. E. Clarke*	240
M. K. Jain	Numerical solution of differential equations (2nd edn.)	*A. Iserles*	236
Klaus Jänich	Topology	*John Baylis*	149

Author	Title	Reviewer	Page
JMB	Problems with patterns and numbers—An O-level module	*Mary Robinson*	223
Ramesh Kapadia & Huw Kyffin (eds.)	Modelling for schools/colleges	*C. B. G. Ash*	311
Wilfred Kaplan	Advanced calculus (3rd edn.)	*David Tall*	244
J. R. Killingbeck	Microcomputer quantum mechanics	*M. Walmsley*	153
K. H. Kim & F. W. Roush	Applied abstract algebra	*Short notice*	76
K. H. Kim & F. W. Roush	Introduction to mathematical consensus theory	*John Baylis*	241
Ann Hibner Koblitz	A convergence of lives (Sofia Kovalevskia: scientist, writer, revolutionary)	*F. G. Ashurst*	154
K. Kodaira	Introduction to complex analysis	*D. H. Griffel*	319
Ladis D. Kovach	Advanced engineering mathematics	*Allan Grady*	155
Alan Lawson	Everyday maths	*M. L. Drukker*	51
D. V. Lindley & W. F. Scott	New Cambridge elementary statistical tables	*G. A. Garreau*	146
Bob McCreddin *et al.*	50 mathematical projects	*D. J. Winteridge*	305
Iain G. Main	Vibrations and waves in physics (2nd edn.)	*John E. G. Farina*	242
I. Miller & J. E. Freund	Probability and statistics for engineers (3rd edn.)	*A. T. Harding*	313
Dragoslav S. Mitrinović & Jovan D. Kečkić	The Cauchy method of residues	*Mary Hart*	61
I. S. Murray	Advanced calculus for engineers and science students	*Martin Stern*	156
L. Murray	Progress in mathematics 1G	*David Griffiths*	53
L. Murray	Progress in mathematics 1C	*David Griffiths*	230
T. R. F. Nonweiler	Computational mathematics: an introduction to numerical approximation	*Max Planitz*	67
T. R. F. Nonweiler	Computational mathematics: an introduction to numerical approximation (paperback)	*Short notice*	321
M. O'Leigeartaigh, J. K. Lenstra & A. H. G. Rinnooy Kan	Combinatorial optimization: annotated bibliographies	*Short notice*	321
L. C. Pascoe	Teach yourself modern mathematics	*Jim Judge*	142
W. J. P. Peart-Jackson	Passport to additional mathematics	*Peter Foster*	53
Jean-Claude Perrot & Stuart J. Woolf	State and statistics in France 1789–1815	*Freda Conway*	313

AUTHOR	TITLE	REVIEWER	PAGE
C. Plumpton, E. Shipton & R. L. Perry	Proof	*John Baylis*	234
L. S. Pontrjagin	Learning higher mathematics: Part I: the method of cordinates; Part II: Analysis of the infinitely small	*B. H. Denton*	71
J. Pottage	Geometrical investigation	*Lenon Beeson*	143
Clive Prigmore	30 hour BASIC (Schools edition)	*Tom Bunting*	56
V. S. Pugachev	Probability theory and mathematical statistics for engineers	*Jeffrey Dodgson*	63
N. A. Rahman	Theoretical exercises in probability and statistics (2nd edn.)	*David Lee*	145
Ruth Rees & George Barr	Diagnosis and prescription in the classroom	*John K. Backhouse*	138
Vijay K. Rohatgi	Statistical inference	*D. V. Lindley*	63
R. A. Rosenbaum & G. Philip Johnson	Calculus: basic concepts and applications	*A. R. Pargeter*	57
A. J. Sadler	Pick and choose: books 1 and 2	*D. R. Whetton*	231
Mark Saks	The calculator cook-book	*Nigel Webb*	57
U. Schendel	Introduction to numerical method for parallel computers	*Richard Walker*	238
R. E. Scraton	BASIC numerical methods (an introduction to numerical mathematics on a microcomputer	*T. J. Randal*	317
Charles C. Sims	Abstract algebra: a computational approach	*Terence Jackson*	307
Charles C. Sims	A CLASSLIB user's manual	*Terence Jackson*	307
J. Smoller	Shock waves and reaction-diffusion equations	*J. A. Bland*	70
SMP	Formulae for advanced mathematics with statistical tables (SMP)	*Janet Dangerfield*	145
SMP	S.M.P. 11–16 Levels 1–4 Learning aids reference pack Level 4 a, b and e reference pack	*P. J. Read*	229
B. Srinivasan & J. D Sally (eds.)	Emmy Noether in Bryn Mawr	*K. Robin McLean*	69
K. A. Stroud	Fourier series and harmonic analysis	*Alan J. Davies*	320

AUTHOR	TITLE	REVIEWER	PAGE
Alan Stuart (ed.)	Statistics: theory and practice. Selected papers by Sir Maurice Kendall	*D. Middleton*	65
M. V. Sweet	Algebra, geometry and trigonometry in science, engineering and mathematics	*Frank Berkshire*	243
Donald Tattersfield	Halley's comet	*M. J. Flowers*	310
G. B. Thomas, Jr. & R. L. Finney	Calculus and analytic geometry (6th edn.)	*M. Suffield*	59
Stewart Townsend	Mathematics in sport	*Graham Brindley*	71
W. T. Tutte	Graph theory	*E. Keith Lloyd*	69
R. L. Wallis	Differential and integral calculus	*M. J. Flowers*	58
David Walton	Programming exercises in BASIC	*Tom Bunting*	57
Philip M. Woodward & Susand G. Bond	Guide to ALGOL 68 for users of RS systems	*Richard I. Shreeve*	66

Once again the editor would like to thank Ernest Long most sincerely for the preparation of this index. VWB